

**Section 8** of the Operators Manual states "The Controller requires no routine service or maintenance". But if you wish to test the unit there are some fairly basic things you can do to test it but please take extreme precaution. The problem will be getting all the necessary cables. You will need the following items:

100ohm "**Non-Inductively wound**" 50 watt test load, 1% tolerance.

Oscilloscope and True RMS Digital Volt meter (RF can be greater than 300Khz make sure your meter can read high frequencies if not you can use the o-scope and calculate output).

Test leads for the indifferent electrodes and catheter output.

You can cut off the ground pads strip the wires and tie them all together and attach them to one end of the test load. For the active output (catheter output) you will need to use the center pin from the APM's catheter output.

#### **Waveform Quality Check:**

1. Connect one side of the precision 100-ohm test load to the two "Indifferent Electrode" connectors on the APM. If using an 822 APM connect both.
2. Connect the other side of the 100-ohm test load to the Distal Pin (center pin of catheter output) of the model (613, 651, 652) cable, which is attached to the APM. The distal pin is the center conductor coming from the APM.
3. Connect the oscilloscope across the 100-ohm test load. Set the vertical scale for the appropriate channel 10 10V/div and set the time scale to 0.5 usec/div. Set the display mode for this channel to AC, and select the Auto trigger.
4. Press RF Power Control once to enter Ready mode, and set the power to 5 Watts.
5. Press the RF Power Control again; this will turn on RF Power. Observe the waveform on the oscilloscope. Verify that it is a sinusoid with amplitude between 50 and 75V p-p.

#### **Output Check:**

1. Connect the differential ground (2 if using an 822T) to one side of the test load and the catheter lead to the other.
2. Connect the RMS voltmeter across the 100ohm load and set it to AC Volts.  
If using a Oscilloscope use this formula to calculate VRMS ( **$VRMS = P \cdot PV / 2 / 1.414$** )
3. Press the RF power control once and set the power to 10W for 60 sec.
4. Press the RF Power Control the voltage should stay between 28-35Vrms, while the power is still on press the power up button once (11W), your meter should read 30-36Vrms.
5. Next press the RF power control once and set the unit for 50W for 5 to 10 sec.  
Press the RF Power control again. With RF power on you should read between 68-73Vrms.
6. Next press the RF power control once and set the unit for 80W for 5 to 10 Sec.  
Press the RF Power control again. With RF power on you should read between 85-94 Vrms.
7. Next press the RF power control once and set the unit for 100W for 5 to 10 Sec.  
Press the RF Power control again. With RF power on you should read between 95-105 Vrms.

TEST LOADS (RESISTOR) ORDER INFORMATION  
PACIFIC RESISTOR COMPANY TARZANA, CA.  
1-800-835-3355

NOTE: Measurements may vary slightly if using an incorrect load.